REMARKS

Claims 1-6, 8 and 9 are pending in this application. By this Amendment, claims 1, 2, 4-6 and 8 are amended, and claim 7 is cancelled without prejudice or disclaimer of the subject matter recited therein. Support for the amendments to claim 1 may be found at least on page 4, lines 24-29 of the specification, and support for the amendments to claim 4 may be found at least on page 5, lines 1-4 of the specification. Furthermore, support for the amendments to claim 5 may be found at least in claim 6, and support for the amendments to claim 6 may be found at least on page 5, lines 9-10 of the specification. Claims 2, 5 and 8 are amended to address informalities and change form. No new matter is added by the above amendments. In view of at least the following, reconsideration and allowance are respectfully requested.

I. Claim Rejection under 35 U.S.C. §103

The Office Action rejects claims 1-9 under 35 U.S.C. §103(a) over U.S. Patent No. 5,350,643 (Imahashi). This rejection is respectfully traversed.

By this Amendment, independent claim 1 recites, in part, "wherein a porosity of the hydrogen electrode-side catalyst layer is lower than a porosity of the air electrode-side catalyst layer, a volume of pore space of the hydrogen electrode-side catalyst layer has a range of 1.0% to 3.0% of a total volume of the catalyst layer, and a volume of pore space of the air electrode-side catalyst layer has a range of 3% to 30% of the total volume of the catalyst layer.

Applicant respectfully submits that the applied art reference does not disclose or establish any reason to provide at least the above-recited features of independent claim 1. The Office Action unreasonably asserts that it would have been obvious to one of ordinary skill in the art to adjust the volume of pore space of the hydrogen electrode-side catalyst layer to account for 1.0% to 3.0% of the total volume of the catalyst layer, and to adjust the volume of pore space of the air electrode-side catalyst layer to account for 3% to 30% of the total

volume of the catalyst layer, in order to adjust the flow of the fuel and oxidant gasses to the electrodes (*see* page 8 of the June 12, 2008 Office Action). Applicant further respectfully submits that the above assertion is based on impermissible hindsight reasoning.

As discussed in the specification, the present application relates at least to suppressing the direct combustion reaction or the generation of hydrogen peroxide in an air electrode-side. Furthermore, the specification discloses that at least the above may be fully accomplished when a volume of pore space of an air electrode-side catalyst layer accounts for 3% to 30% of the total volume of the catalyst layer, and a volume of pore space of a hydrogen electrode-side catalyst layer accounts for 1.0% to 3.0% of the total volume of the catalyst layer (page 3, line 2 to page 4, line 23).

Imahashi does not disclose or establish any reason to provide the technical problem to be solved by the objective of the current application. Moreover, Imahashi discloses a preferred porosity of 35%-65% for the hydrogen electrode of a fuel cell, and that the porosity of the oxygen electrode is higher than the hydrogen electrode. Specifically, Imahashi discloses that the porosity of the electrodes have a suitable range and when the porosity is too low, diffusion of the gas is insufficient and the reaction does not proceed (col. 6, lines 36-39). Imahashi further provides that porosity has a proper range and according to the investigation by the inventors that the porosity of the hydrogen electrode is preferably 35 to 60%, and that the porosity of the oxygen electrode is preferably 40 to 65% (col. 6, lines 44-48). However, Imahashi fails to disclose the claimed volume of pore space of the hydrogen and air electrode-side catalyst layers, as recited in claim 1.

Therefore, the alleged rationale to modify Imahashi relating to the advantages and disadvantages of increasing/decreasing the pore space is based on impermissible hindsight reasoning. Thus, the Office Action fails to consider what would have been obvious to one of ordinary skill in the art at the time the invention was made (MPEP §2141.03(III)). The issue

is not what would have been obvious to the inventor, a judge, a layman, a genius, etc., but to a skilled artisan. Furthermore, Imahashi teaches away from the volume of pore space as recited in independent claim 1 (MPEP §2141.02(VI)).

Imahashi does not disclose or establish any reason to provide the features of independent claim 1, at least for the reasons discussed above. Therefore, the applied art reference fails to render obvious the subject matter recited in independent claim 1, and the claims dependent therefrom.

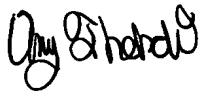
Accordingly, withdrawal of the rejection is respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: September 12, 2008

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